REMARKS

The Claims are rejected under 35USC§102(b) and 103(a) over the following four references: US Patent No. 5,563,164 (Clemens et al.); publication by Penning et al, J. Med Chem, (1995), vol. 38, No. 6, pages 858-868; US Patent No. 5,073, 562 (Djuric et al), and US Patent No. 5,352,690 (Sofia). Claims 29-30 are rejected under 35USC§112, second paragraph for being independent claims that rely on Claim 1 for definitions. The examiner has also provisionally rejected the claims under the doctrine of Double Patenting and has issued a warning that Claims 36-43 are objectionable because they are substantial duplicates of one another. These issues are all addressed below.

The claims have been amended so that the substituents R^3, R^5, R^6, R^7, R^8, R^9, and R^{10} are all H. New definitions of R^1 and R^2 have also been substituted for the previous definitions. These changes are supported by Claims 2, 7, 8, 26, 27, and 28, and by the specification at page 11, lines 15-17; page 11, lines 21-29; page 12, line 18; and page 12, lines 15-16.

The rejection of Claims 29 and 30 under 35 USC§112, second paragraph, has been addressed by combining Claims 29 and 30 and importing the definitions from Claim 1.

Rejections under 35 USC§102(b)

With respect to Examples 6 and 12 in Clemens et al, R^5 and R^{10} in this application are H, whereas the corresponding substituents are alkyl groups in Clemens et al.

With respect to the publication by Penning et al, the compounds cited by the examiner all have a methoxy substituent at the R^3 position and a propyl substituent at the R^{10} position, using the numbering in this application. R^3 and R^{10} in the current application are both H. All of the compounds cited by the examiner except for compound 11 have a 5-membered heteroaromatic ("Hetaryl" in this

application) group at the position R^4. The R4 position in this application does not have a Hetaryl substituent.

With respect to the patent by Djuric et al, the R^{10} group in the cited examples in Djuric et al is propyl and the R^3 group is methoxy. R^{10} and R^3 in the current application are both H. Furthermore, the substituent at the R^4 position in the cited examples in Djuric et al is a 5-membered heteroaromatic group, which is not one of the choices for R^4 in the current application. Furthermore, the generic formulae I, IA, and II, and the formulae in Schemes A, B, and C all differ from applicants' claimed compounds in the same general way as the specific compounds cited by the examiner. The substituent at R^{10} in Djuric (using applicant's numbering) is alkyl rather than H. The substituent at R^3 in Djuric is methoxy rather than H. The substituent at R^4 in Djuric et al is a 5-membered heteroaromatic group or a precursor to a 5-membered heteroaromatic group, and is different than the choices for R^4 in the current application.

With respect to Sofia, the generic formulae in column I and elsewhere in Sofia do not overlap applicants' claims. Sofia always has a hydroxyl or benzyloxy substituent in the position that corresponds to R^5 in applicants' claims. R^5 in applicant's claims is H. The description of the half of the molecule in Sofia that includes a chomane group is very broadly written, and provides the possibility of not having a substituent on the aromatic portion of the chomane. However, the more detailed description of the group in columns 3 and 4 has an n-propyl group in the position corresponding to R^{10} in the current application, where R^{10} in applicants' claims is H. Similarly examples 9 and 10 in Sofia both have propyl groups in the position corresponding to R^{10} in the current application.

Finally, the position corresponding to R^1 in all four references is H, whereas the R^1 substituent in applicants' compounds is halogen or alkyl.

In summary, none of the four cited references anticipates the current claims.

Rejections under 35 USC§103(a)

The examiner has rejected the claims under 35 USC§103(a) over the same references. In Applicants' claimed compounds, R^3, R^5, R^6, R^7, R^8, R^9, and R^{10} are all H. R^1 and R^2 are halogen or alkyl. In the cited references R^{10} is always alkyl with the exception of the very broad generic description in column 2 of Sofia, where R^{10} can be alkyl or H. In the cited references, at least one of R^3, R^5 and R^6 is always a substituent other than H, whereas R^3, R^5 and R^6 in applicants' claims are always H. Furthermore, R^1 is alkyl or halogen in Applicants' claims, whereas R^1 is H in the cited references.

The chromane group in applicants' invention has no substituents other than R^1 and the tether to the phenyl, whereas the chromane group in all of the cited compounds always has at least one alkyl substituent on the aromatic ring. Furthermore, the phenyl group in the other half of the molecule in applicants' claims always has two (and only two) substituents (R^2 and R^4) in addition to the tether group. By comparison, the corresponding phenyl group in all of the examples and generic formulae in the cited references always has three substituents in addition to the tether group.

Applicants' claimed compounds therefore have a different number of substituent groups on the aromatic rings on both sides of the molecule. Applicants' compounds are not homologs of the compounds in the cited references, nor are they positional isomers with respect to either the phenyl rings or the chromane rings of the cited references. Also, R^1 is H in the references and is halogen or alkyl in applicants' compounds. Therefore, applicants' claims are not prima facie obvious over the cited references. There are at least three significant differences between the claimed compounds and the cited references.

Because the structures of applicants' compounds are not prima facie obvious over the cited art, the medical use claims also are not obvious over the cited references.

Provisional Double Patenting Rejection

The examiner has stated that the current application and copending commonly assigned application No. 09/961,841, now allowed, both claim the same invention. As stated previously the applications do not claim the same subject matter. In Serial No. 09/961,841, the substituent R^4 is –OAr, where Ar is naphthyl or phenyl. In this application, R^4 can be a cycloalkoxy group or an alkoxy group, but not phenoxy or naphthyloxy.

Therefore, since R^4 is different in the two applications, the applications claim completely different subject matter. There are no chemical compounds that can fall within the scope of the claims of both applications.

Therefore, there is no double patenting.

Paragraph marked "Warning"

The examiner has also stated that Claims 36-43 are substantial duplicates of one another. Applicants respectfully disagree. Each claim is directed to the treatment of a different disease in a mammalian patient in need of treatment by administering a therapeutically effective amount of a compound of this invention. Because the diseases are different, the population of patients in need of treatment will be different, and the therapeutically effective amount may be different. These claims differ sufficiently that they are not duplicates of one another.

Conclusions

It is respectfully submitted that the claims are patentable over the cited references. There are no issues relating to double patenting or the presentation of claims that are duplicates of one another. The claims are therefore in condition for allowance. A timely Notice of Allowance is respectfully requested.

Respectfully submitted,

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